

A DRILL BIT HAVING LARGE DIAMETER PDC CUTTERS

Abstract

A variety of large diameter PDC cutters for use in drill bits are disclosed. Specifically, various PDC cutters having a diameter between 19.0 mm and 25.0 mm are disclosed. The various PDC cutters disclosed include an elliptical PDC cutter, wherein a major diameter of the elliptical cutter is selected from a range of 19.0 mm to 25.0 mm, a circular PDC cutter, wherein a diameter of the circular cutter falls between 19.0 mm and 25.0 mm, and a non-planar substrate cutter, wherein a diameter of the non-planar cutter falls between 19.0 mm and 25.0 mm. Additionally, the thickness of the diamond table is increased as compared to prior art PDC cutters. The increase in diamond table thickness results in improved durability and performance.

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